REMARKS

The Official Action of 16 January 2007 has been carefully considered and reconsideration of the application as amended is respectfully requested.

Claims 1, 4 and 7 have been amended to make editorial changes of a formal nature which do not affect the scope of the claims. The amendment to claim 7 removes the basis for the objection at paragraph 1 of the Official Action.

The claims stand rejected under 35 USC 103(a) as allegedly being unpatentable over Applicant's alleged acknowledged state of the art in view of Rotermund et al or over this combination further in view of Abouy et al. Applicant respectfully traverses these rejections.

The rejection is based at least in part upon the Examiner's contention at paragraph 3 of the Official Action that the ratio of gases described in the primary reference, Rotermund et al, overlaps that of the instant claims. Applicant respectfully disagree and submit that a proper consideration of the reference shows that it does not teach, and in fact teaches away from, the claimed ratio. The claimed ratio is 50 of weight of blowing agent gas to 1 of weight of additive gas to 400 of weight of blowing agent gas to 1 of weight of additive gas. The prior art does not teach this ratio, as next discussed.

From US patent 5,965,231 it is known to use cyclopentane and argon in a ratio from

1:99 to 95:5 percent **by volume**.

To clarify a comparison between the claimed ratio and the ratio described in the reference, Applicant has converted the ratio in the claimed invention from percent by weight into percent by volume thereby to make the claimed ratios easier to compare with the ratios taught in US 5,965,231.

Such a conversion leads to the following; when the molar weight of argon is 39.5 g/mol and when the molar weight of cyclopentane (C_5H_{10}) is 70.1 g/mol, the ratios given in percent by weight are equivalent to:

50 of weight of blowing agent gas to 1 of weight of additive gas corresponds to

50 weight of cyclopentane to 1 of weight of argon.

With 1 mole of a substance taking up the same space whether it is cyclopentane or it is argon the volume can be determined.

Cyclopentane: $\frac{50g}{70.1\ g/mole} = 0.71$ mole

Argon: $\frac{1g}{39.5g/mole} = 0.025$ mole

0.71 mole: 0.025 mole corresponds to a ratio of 0.025/0.025 corresponding to 28:1.

In other words, 50:1 of weight corresponds to 28:1 by volume.

400 of weight of blowing agent gas to 1 of weight of additive gas corresponds to 400 of weight of cyclopentane to 1 of weight of argon.

Cyclopentane: $\frac{400g}{70.1g/mole} = 5.7$ mole

Argon: $\frac{1g}{39.5g/mole} = 0.025$ mole

5.7 mole: 0.025 mole corresponds to a ratio of 5.7/0.025 : 0.025/0.25 corresponding to 228:1.

In other words, 400:1 of weight corresponds to 228:1 by volume.

The widest range taught in Rotermund US 5,965,231 is the ratio from 1:99 to 95:5 percent by volume. This range can also be expressed from 0.01:1 to 19:1, which is well below the ratio defined in the claimed invention.

28:1 to 400: 1 is not within the range of 0.01:1 to 19:1!

In short, the cited reference teaches an upper range of the ratio of gases that is below the lower end of the claimed ratio. Accordingly, it is not known from the reference to use cyclopentane and argon in the claimed ratio from 50:1 to 400:1 percent by weight (which is equivalent to a ratio from 28:1 to 228:1 by volume), and it is further not known to use gases comprising at least one blowing-agent gas and at least one additive gas in the claimed ratio. Moreover, insofar as the reference teaches that the particularly preferred and most preferred ratios are **further removed** from the claimed ratio than the preferred ratio discussed above (see Rotermund at column 3, lines 52-55), the reference actually **teaches away** from the

claimed ratio.

Accordingly, although the Examiner contends that the ratio of gases described in Rotermund is only a preferred ratio and that it would have been obvious to adjust the amounts of the two gases to provide optimum properties, the reference teaches that, to obtain such optimum properties, one would adjust the ratios in a manner **away from** the claimed ratios. Where, as here, there is a teaching away from the claimed ratios, the prior art cannot be said to render the claims obvious. See, e.g., MPEP 2145(X)(D); see, also, MPEP 2144.05(III) ("A *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention.")

In view of the above, Applicant respectfully submits that the prior art does not teach, and in fact teaches away from, the recited use of a mixture of gases in the claimed ratio as the blowing agent/additive gas in the foam layer of the claimed product in order to provide improved insulation properties to the claimed laminate. Accordingly, Applicant respectfully submits that the prior art rejection should be withdrawn.

Applicant respectfully submits that all rejections and objections of record have now been overcome and that the application is in allowable form. An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,

CLIFFORD J. MASS
LADAS & PARRY LLP
26 WEST 61ST STREET
NEW YORK, NEW YORK 10023
REG. NO.30,086(212)708-1890